



• PHYSICIAN WORKFORCE 2000 •
PRIMARY CARE PHYSICIANS



THE SECOND IN A SERIES

THIS PHYSICIAN WORKFORCE SERIES

- ALL LICENSED PHYSICIANS
- PRIMARY CARE PHYSICIANS
- LICENSED MD PHYSICIANS
- LICENSED DO PHYSICIANS
- GRADUATE MEDICAL EDUCATION
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Introduction

The year 2000 has significance concerning physician workforce issues. State public policy concerning physician workforce focuses upon medical education enterprises. Therefore, this analysis is using the federal Council on Graduate Medical Education (COGME) discussions and policy recommendations as benchmarks for examining the Oklahoma workforce in 2000. Other than being the beginning of a new millennium, there are real timeline milestones to consider.

- The Council on Graduate Medical Education (COGME) is a federal enterprise that was formed in 1986. COGME has suggested comprehensive national policy goals for 2000.
- Oklahoma created a Physician Manpower Training Commission more than 25 years ago. Its initial focus was to promote primary care.
- Oklahoma established two new medical education enterprises in Tulsa in order to educate, train and produce primary care physicians.

Given these critical policy initiatives, it is important to accurately and comprehensively measure and document benchmarks this year.

Data Sources

Unless otherwise specified, these data are the adjusted 2000 census of allopathic and osteopathic physicians in Oklahoma. Databases were adjusted to insure that only physicians with active licenses are included. Retired and resident/fellow physicians are excluded from the counts. Physicians who may not practice, but possess active licenses, are included. MD data were cited from the Oklahoma Board of Medical Licensure and Supervision. Osteopathic physician data were provided by the Oklahoma Board of Osteopathic Medical Examiners. Both agencies are the official licensing authorities for the state of Oklahoma.

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This Analysis

This study focuses upon primary care physicians. The benchmarks used for the analysis are COGME goals for 2000. This is important because primary care physicians:

- Comprise 40% or more of the workforce.
- Treat the broadest range of patients.
- Are well-distributed throughout a state.
- Determine eligibility for federal designations, and associated benefits, such as Health Professional Shortage Areas (HPSA), Medically Underserved Areas (MUA) and their various sub-designations.

Cautions

There are many ways to categorize and count physicians. Methodologies are often specific to a single program or purpose.

This workforce count may differ from some published nationally by the federal government and other sources. The primary difference is the definition of active. This analysis counts physicians with active licenses. The primary source is state licensing boards which are only concerned with credentialing privileges to practice. This count will be more current, and is best for intra-state analysis.

Other databases consider licensed physicians with active practices. The primary sources are professional associations who administer supplemental questionnaires asking for specific professional activity. Typically, these counts are a little less than those quoted here. These counts are best for inter-state analysis.

Theoretical Need

All analyses that follow are distilled from the tables on pages three and four. Those tables array Oklahoma regions and counties and use COGME goals to determine the theoretical level of primary care physician need for an area.

COGME recommends that there be between 60-80 primary care physicians to serve 100,000 people; or 6-8 physicians per 10,000 people ... or one primary care physician for 1,250 - 1,667 people.

Federal Designations

The federal government operates a variety of programs to address geographic areas and/or populations that are underserved. One of the significant eligibility determinants is the available primary care workforce. These designations/ programs include:

- Health Professional Shortage Area (HPSA) by three categories (geographic areas, special populations and public non-profit facilities); and by three separate services (dental care, primary health care and mental health)
- Governor's Designated Shortage Area (GDSA)
- Medically Underserved Area (MUA)

The eligibility for these programs is complex and requires sub-county data and some subjective information. Each requires a different algorithm and uses a different methodology. This issue paper will not reference these programs or attempt to demonstrate eligibility for them.

Those interested in further information about these programs should contact: The Oklahoma Office of Primary Care, 1000 N.E. Tenth, Room 1113, Oklahoma City, OK 73117-1299. (405) 271-8428, (405) 271-2886 (fax). E-Mail: PrimaryCare@health.state.ok.us

This analysis will focus upon the global goals of COGME.

Cities

There is no universal method to estimate need for small areas, or by city. Expressions of need are normally calculated at a higher level. Also, there is no easy measure of specialty overlap. For example, an obstetrician may provide a degree of primary care in an urban setting ... and a primary care physician will offer obstetrical care in rural communities. Although our databases provide counts by community of practice, there is no accompanying analysis of over/under supply at that level for these reasons.

One must have a great deal more information, some of it qualitative, in order to assess the ability of the market to support physicians. Also, it is likely that only cities of similar size, and similar geography/demography, may be compared to each other.

Urban Counties

In states like Oklahoma, most counties are self-contained economic units and markets. The major exception is in urban areas where metro and suburban counties blend commercially and socially.

Table 1
Primary Care Physicians in Oklahoma
Per 100,000 Population 2000

Physicians to 100k Population				
Region	2000 Pop	FamMed	PriCare	All Phys
Enid MSA	57,813	42.1	70.2	209.3
Ft. Smith MSA	38,972	34.3	36.9	48.8
Lawton MSA	114,996	41.3	66.5	161.7
OKC MSA	1,083,346	35.8	76.1	225.4
Tulsa MSA	803,235	45.9	94.1	225.0
Metro Counties	2,098,362	40.2	81.7	218.0
Non-Metro Counties	1,352,292	36.9	57.3	98.0
Statewide	3,450,654	37.8	70.1	171.0

Licensed Physicians				
Region	2000 Pop	FamMed	PriCare	All Phys
Metro Counties	2,098,362	817	1,661	4,575
Non-Metro Counties	1,352,292	488	759	1,325
State of Oklahoma	3,450,654	1,305	2,420	5,900

Metro Counties	61%	63%	69%	78%
Non-Metro Counties	39%	37%	31%	22%

There are five MSA areas in the state. Only two are significant metropolitan areas in the classic sense. One is Tulsa county and its four surrounding suburban counties; the other is Oklahoma county and its five surrounding suburban counties. Comanche (Lawton) and Garfield (Enid) are single county MSAs. Sequoyah county (suburban to Fort Smith, AR) is another anomaly.

If one combines metro and suburban counties, and uses the high end of the suggested ratios (80 PCP/100k Pop), it is suggested that 1,679 primary care physicians are needed. The 2000 count lists 1,666 active primary care physicians, or 99.2% of need. The Tulsa MSA appears to be "oversupplied" by 80 physicians. The other MSAs are "undersupplied" as follows: Oklahoma City, 65; Lawton, 21 and Enid, 6. For all intents and purposes, the metropolitan areas of Oklahoma have neither an over nor under supply.

Non-Metro Regions

The remaining 64 counties may be divided into seven logical regions. Each regional need was measured using the lower end of the suggested ratio.

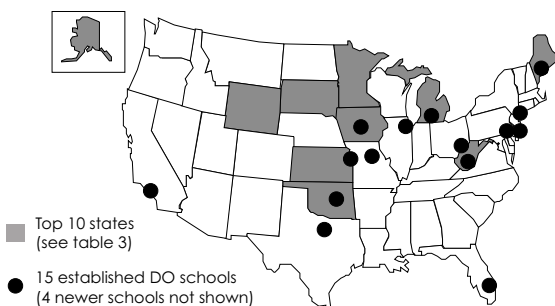
Table 2
Oklahoma Primary Care Physicians in Non-Metro Regions
Measured Against COGME Benchmarks

Region	Count	Need	Change	Pct Need
Northwest	43	38	-5	113%
South Central	60	59	-1	102%
Northeast	247	249	2	99%
Southwest	96	99	3	97%
Central	166	182	16	91%
North Central	42	52	10	81%
Southeast	96	132	36	73%
Non-Metro	750	811	61	92%

Summary

Oklahoma's primary care physicians are reasonably distributed between metro and non-metro areas. The exceptions are Tulsa, with two primary care oriented medical education enterprises; and the Fort Smith (Sequoyah County) area, which relies upon Arkansas based physicians. Family medicine physicians are remarkably well distributed in both urban and rural areas. There are pockets of obvious non-metro need, predominantly in Southeast and North Central regions.

Figure 1
A National Perspective - 1998
Percent of Licensed Physicians in Primary Care, 1998



Primary Care Mix

There are three quantitative measures of physician workforce. Two are volume and specialty mix. Distribution is a third, and is analyzed elsewhere in this series.

Oklahoma ranks second in the nation in the proportion of practicing primary care physicians.

The proportion of osteopathic physicians to all physicians in Iowa and Oklahoma (and Michigan) is three times the national average.

Primary Care Numbers

A measure of the volume of services available is the number of physicians per the population. The table below indicates that Oklahoma is slightly below the national average when compared to other states.

Given the high proportion of primary care physicians, and the favorable total numbers ... it seems that Oklahoma is well-served on a state-to-state comparison basis.

The discussions elsewhere in this analysis identify pockets of primary care physician need in the state.

Table 3
Percent of Physicians Practicing Primary Care, 1998

1	Iowa	42.2%
2	Oklahoma	40.8%
3	West Virginia	40.0%
4	Wyoming	39.4%
5	Kansas	39.4%
6	Maine	39.4%
7	Alaska	39.3%
8	Michigan	39.1%
9	South Dakota	38.8%
10	Minnesota	38.5%
US		34.1%
40	Nevada	32.8%
41	Georgia	32.5%
42	South Carolina	32.4%
43	North Carolina	32.3%
44	Utah	32.2%
45	Delaware	32.1%
46	New York	30.6%
47	Maryland	30.0%
48	Connecticut	29.4%
49	Louisiana	29.4%
50	Massachusetts	29.3%
51	DC	25.3%

Table 4
Primary Care Physicians Per 100,000 Population, 1998

1	DC	113.2
2	Vermont	84.7
3	Pennsylvania	84.5
4	Maine	82.6
5	New Jersey	82.1
6	Rhode Island	81.7
7	Massachusetts	81.2
8	New York	81.0
9	Maryland	78.4
10	Hawaii	78.0
US		67.3
26	Oklahoma	65.0
40	Kentucky	58.1
41	North Carolina	56.8
42	Indiana	56.0
43	Texas	55.2
44	Georgia	55.2
45	Alabama	55.2
46	Louisiana	53.7
47	South Carolina	53.5
48	Idaho	53.2
49	Nevada	52.9
50	Utah	50.3
51	Mississippi	47.3

Source: Personal correspondence (5/1/01) of unpublished data from Michael Dill, Center for Health Workforce Studies, School of Public Health, University of Albany, State University of New York, supported by HRSA 230-BHR-26(9).

Table 5
Non-Metro County Analysis of Theoretical (COGME) Need
Active Licensed Oklahoma Primary Care Physicians, July 2000

County	Region	2000 Pop	Count	COGME		
				Need	Change	Pct
Alfalfa	North Central	6,105	1	4	3	27%
Coal	Southeast	6,031	1	4	3	28%
Grant	North Central	5,144	1	3	2	32%
Lincoln	Central	32,080	7	19	12	36%
Washita	Southwest	11,508	3	7	4	43%
Population	2% of State	60,868	13	37	24	
Tillman	Southwest	9,287	3	6	3	54%
Mayes	Northeast	38,369	13	23	10	56%
Love	South Central	8,831	3	5	2	57%
Beaver	Northwest	5,857	2	4	2	57%
Atoka	Southeast	13,879	5	8	3	60%
Caddo	Central	30,150	11	18	7	61%
Latimer	Southeast	10,692	4	6	2	62%
McCurtain	Southeast	34,402	13	21	8	63%
Marshall	South Central	13,184	5	8	3	63%
Choctaw	Southeast	15,342	6	9	3	65%
Major	North Central	7,545	3	5	2	66%
Craig	Northeast	14,950	6	9	3	67%
Garvin	Central	27,210	11	16	5	67%
McIntosh	Northeast	19,456	8	12	4	69%
Okfuskee	Northeast	11,814	5	7	2	71%
Adair	Northeast	21,038	9	13	4	71%
Pushmataha	Southeast	11,667	5	7	2	71%
Noble	North Central	11,411	5	7	2	73%
Seminole	Central	24,894	11	15	4	74%
Population	10% of State	329,978	128	198	70	
Cotton	Southwest	6,614	3	4	1	76%
Bryan	Southeast	36,534	17	22	5	78%
Johnston	South Central	10,513	5	6	1	79%
LeFlore	Southeast	48,109	23	29	6	80%
Okmulgee	Northeast	39,685	19	24	5	80%
Pawnee	Northeast	16,612	8	10	2	80%
Grady	Central	45,516	22	27	5	81%
Delaware	Northeast	37,077	18	22	4	81%
Stephens	Southwest	43,182	21	26	5	81%
Jackson	Southwest	28,439	14	17	3	82%
Hughes	Central	14,154	7	8	1	82%
Pittsburg	Southeast	43,953	22	26	4	83%
Haskell	Northeast	11,792	6	7	1	85%
Kay	North Central	48,080	27	29	2	94%
Population	12% of State	430,260	212	258	46	
Cimarron	Northwest	3,148	2	2	0	100%
Dewey	Northwest	4,743	3	3	0	100%
Harmon	Southwest	3,283	2	2	0	100%
Harper	Northwest	3,562	2	2	0	100%
Jefferson	South Central	6,818	4	4	0	100%
Kingfisher	Central	13,926	8	8	0	100%
Roger Mills	Northwest	3,436	2	2	0	100%
Woods	North Central	9,089	5	5	0	100%
Carter	South Central	45,621	28	27	-1	102%
Ottawa	Northeast	33,194	21	20	-1	105%
Woodward	Northwest	18,486	12	11	-1	108%
Nowata	Northeast	10,569	7	6	-1	110%
Blaine	Central	11,976	8	7	-1	111%
Payne	Central	68,190	46	41	-5	112%
Washington	Northeast	48,996	33	29	-4	112%
Kiowa	Southwest	10,227	7	6	-1	114%
Custer	Southwest	26,142	19	16	-3	121%
Texas	Northwest	20,107	15	12	-3	124%
Cherokee	Northeast	42,521	33	26	-7	129%
Beckham	Southwest	19,799	16	12	-4	135%
Muskogee	Northeast	69,451	61	42	-19	146%
Pontotoc	Central	35,143	35	21	-14	166%
Murray	South Central	12,623	15	8	-7	198%
Ellis	Northwest	4,075	5	2	-3	204%
Greer	Southwest	6,061	8	4	-4	220%
Population	15% of State	531,186	397	319	-78	

Example interpretation: Okmulgee county has 19 primary care physicians with active licenses. In order to provide a ratio of 60 primary care physicians per 100,000 people, the county requires 24 physicians, or an additional 5 physicians. The county is currently at 80% of the recommended COGME need.

Table 6
Active Licensed Oklahoma Physicians, July 2000
Primary Care Physicians by Region by County

	2000 Pop	PriCare	COGME Total Needed			COGME Change Needed		
			Low	Mid	Hi	Low	Mid	High
Metro								
Tulsa	563,299	649	338	394	451	-311	-255	-198
Oklahoma	660,448	624	396	462	528	-228	-162	-96
Comanche	114,996	71	69	80	92	-2	9	21
Garfield	57,813	40	35	40	46	-5	0	6
Sub-total	1,396,556	1,384	838	976	1,117	-546	-408	-267
Suburban								
Canadian	87,697	37	53	61	70	16	24	33
Cleveland	208,016	96	125	146	166	29	50	70
Creek	67,367	32	40	47	54	8	15	22
Logan	33,924	6	20	24	27	14	18	21
McClain	27,740	8	17	19	22	9	11	14
Osage	44,437	11	27	31	36	16	20	25
Pottawatomie	65,521	30	39	46	52	9	16	22
Rogers	70,641	39	42	49	57	3	10	18
Sequoyah	38,972	14	23	27	31	9	13	17
Wagoner	57,491	11	34	40	46	23	29	35
Sub-total	701,806	284	420	490	561	136	206	277
Southwest								
Beckham	19,799	16	12	14	16	-4	-2	0
Cotton	6,614	3	4	5	5	1	2	2
Custer	26,142	19	16	18	21	-3	-1	2
Greer	6,061	8	4	4	5	-4	-4	-3
Harmon	3,283	2	2	2	3	0	0	1
Jackson	28,439	14	17	20	23	3	6	9
Kiowa	10,227	7	6	7	8	-1	0	1
Stephens	43,182	21	26	30	35	5	9	14
Tillman	9,287	3	6	7	7	3	4	4
Washita	11,508	3	7	8	9	4	5	6
Sub-total	164,542	96	99	115	132	3	19	36
Southeast								
Atoka	13,879	5	8	10	11	3	5	6
Bryan	36,534	17	22	26	29	5	9	12
Choctaw	15,342	6	9	11	12	3	5	6
Coal	6,031	1	4	4	5	3	3	4
Latimer	10,692	4	6	7	9	2	3	5
Le Flore	48,109	23	29	34	38	6	11	15
McCurtain	34,402	13	21	24	28	8	11	15
Pittsburg	43,953	22	26	31	35	4	9	13
Pushmataha	11,667	5	7	8	9	2	3	4
Sub-total	220,609	96	132	154	176	36	58	80
Central								
Blaine	11,976	8	7	8	10	-1	0	2
Caddo	30,150	11	18	21	24	7	10	13
Garvin	27,210	11	16	19	22	5	8	11
Grady	45,516	22	27	32	36	5	10	14
Hughes	14,154	7	8	10	11	1	3	4
Kingfisher	13,926	8	8	10	11	0	2	3
Lincoln	32,080	7	19	22	26	12	15	19
Payne	68,190	46	41	48	55	-5	2	9
Pontotoc	35,143	35	21	25	28	-14	-10	-7
Seminole	24,894	11	15	17	20	4	6	9
Sub-total	303,239	166	182	212	243	16	46	77
South Central								
Carter	45,621	28	27	32	36	-1	4	8
Jefferson	6,818	4	4	5	5	0	1	1
Johnston	10,513	5	6	7	8	1	2	3
Love	8,831	3	5	6	7	2	3	4
Marshall	13,184	5	8	9	11	3	4	6
Murray	12,623	15	8	9	10	-7	-6	-5
Sub-total	97,590	60	59	68	78	-1	8	18
Northwest								
Beaver	5,857	2	4	4	5	2	2	3
Cimarron	3,148	2	2	2	3	0	0	1
Dewey	4,743	3	3	3	4	0	0	1
Ellis	4,075	5	2	3	3	-3	-2	-2
Harper	3,562	2	2	2	3	0	0	1
Roger Mills	3,436	2	2	2	3	0	0	1
Texas	20,107	15	12	14	16	-3	-1	1
Woodward	18,486	12	11	13	15	-1	1	3
Sub-total	63,414	43	38	44	51	-5	1	8

	2000 Pop	PriCare	COGME Total Needed			COGME Change Needed		
			Low	Mid	Hi	Low	Mid	High
Northeast								
Adair	21,038	9	13	15	17	4	6	8
Cherokee	42,521	33	26	30	34	-7	-3	1
Craig	14,950	6	9	10	12	3	4	6
Delaware	37,077	18	22	26	30	4	8	12
Haskell	11,792	6	7	8	9	1	2	3
Mayes	38,369	13	23	27	31	10	14	18
McIntosh	19,456	8	12	14	16	4	6	8
Muskogee	69,451	61	42	49	56	-19	-12	-5
Nowata	10,569	7	6	7	8	-1	0	1
Okfuskee	11,814	5	7	8	9	2	3	4
Okmulgee	39,685	19	24	28	32	5	9	13
Ottawa	33,194	21	20	23	27	-1	2	6
Pawnee	16,612	8	10	12	13	2	4	5
Washington	48,926	33	29	34	39	-4	1	6
Sub-total	415,524	247	249	291	332	2	44	85
North Central								
Alfalfa	6,105	1	4	4	5	3	3	4
Grant	5,144	1	3	4	4	2	3	3
Kay	48,080	27	29	34	38	2	7	11
Major	7,545	3	5	5	6	2	2	3
Noble	11,411	5	7	8	9	2	3	4
Woods	9,089	5	5	6	7	0	1	2
Sub-total	87,374	42	52	61	70	10	19	28
Metro	1,396,556	1,414	838	978	1,117	-576	-436	-297
Suburban	701,806	252	421	491	561	169	239	309
Sub-total	2,098,362	1,666	1,259	1,469	1,679	-407	-197	13
Southwest	164,542	96	99	115	132	3	19	36
Southeast	220,609	96	132	154	176	36	58	80
Central	303,239	166	182	212	243	16	46	77
South Central	97,590	60	59	68	78	-1	8	18
Northwest	63,414	43	38	44	51	-5	1	8
Northeast	415,524	247	249	291	332	2	44	85
North Central	87,374	42	52	61	70	10	19	28
Sub-total	1,352,292	750	811	947	1,082	61	197	332
OKLAHOMA	3,450,654	2,416	2,070	2,415	2,761	-346	-1	345
Metro								
Enid	57,813	40	35	40	46	-5	0	6
Ft. Smith	70,641	7	42	49	57	35	42	50
Lawton	114,996	71	69	80	92	-2	9	21
OKC	1,085,192	803	651	760	868	-152	-43	65
Tulsa	840,361	752	504	588	672	-248	-164	-80
Total	2,169,003	1,673	1,301	1,518	1,735	-372	-155	62
Rural	1,281,651	743	769	897	1,025	26	154	282
OKLAHOMA	3,450,654	2,416	2,070	2,415	2,761	-346	-1	345

This Table: The table above list the counties in Oklahoma, their 2000 population and the number of licensed primary care physicians reporting that county as their office location. The COGME recommendations suggest that the number of primary care physicians per 100,000 people should be between 60-80.

•The first set of "lo-mid-high" columns suggest the calculated total number of physicians necessary to meet those ratios.

•The second set of columns indicate the calculated number of additional physicians necessary to meet the COGME ratios.

The counties are grouped by metro, suburban, and other counties by region in the state. The regions are summarized.

Interpretation: Okmulgee county (pop 39,685) has 19 primary care physicians with active licenses. The COGME recommendations call for 60 - 80 primary care physicians per 100,000 people. This chart has computations for 60 (low), 70 (midpoint) and 80 (high) PCP/100k population. In order to provide a ratio of 60 primary care physicians per 100,000 people, the county requires 24 physicians, or an additional 5 physicians. To achieve the state average, and midpoint COGME ratio of 70 primary care physicians per 100,000 people, 28 physicians are needed, or an additional 9. Similarly, to provide a ratio of 80 primary care physicians per 100,000 people, the county requires 32 physicians, or an additional 13.